

CLAIMS

1. Method for processing an image displayed by a display device comprising at least one light source and one light valve for
5 transmitting or reflecting all or part of the light produced by the light source, depending on the video signal of the image to be displayed, characterized in that it comprises the following steps:

- applying a compression factor C to the grey levels of the image video signal that are higher than a first threshold value (NG_1), the
10 said first threshold value (NG_1) being lower than the peak grey level value (NG_{max}) of the image video signal,

- adjusting the luminance of the light produced by the light source to the luminance value corresponding to the peak grey level (NG'_{max}) of the image after compression,

- 15 - multiplying the video signal delivered to the light valve by an expansion factor D equal to the ratio of the peak grey level of the image before compression (NG_{max}) to the peak grey level of the image after compression (NG'_{max}).

20 2. Method according to Claim 1, characterized in that the first threshold value (NG_1) is equal to the lowest grey level of the X brightest pixels of the image to be displayed, X being a predefined percentage of the number of pixels in the image.

25 3. Method according to Claim 2, characterized in that the compression factor C is taken equal to the ratio of the difference between the peak grey level value (NG_{max}) of the image before compression and the said first threshold value (NG_1) to the difference between a second threshold value (NG_2) and the said first threshold value (NG_1), the second
30 threshold value (NG_2) corresponding to the value of the peak grey level (NG'_{max}) of the image after compression.

35 4. Method according to Claim 3, characterized in that the second threshold value (NG_2) is dependent on the first threshold value (NG_1).

5. Method according to Claim 4, characterized in that the second threshold value (NG_2) is the arithmetic mean value of the first

threshold value (NG_1) and the peak grey level value (NG_{MAX}) that can be displayed by the said display device.

5 6. Method according to Claim 4, characterized in that the compression factor C is constant whatever the said first threshold value (NG_1), the difference between the said second threshold value (NG_2) and the said first threshold value (NG_1) thus being constant.

10 7. Method according to one of Claims 1, characterized in that the first threshold value (NG_1) is greater than or equal to half the maximum value of grey level (NG_{MAX}) that can be displayed by the said display device.

15 8. Device for displaying an image comprising:
- a light source (1) for producing light,
- a light valve (4) for transmitting or reflecting all or part of the light produced by the light source,
- a circuit (6) for controlling the valve, receiving a video signal of the image to be displayed and delivering a control signal to the said valve that
20 is representative of the image to be displayed,
characterized in that the control circuit comprises:

- means for applying a compression factor C to the grey levels of the image video signal that are higher than a first threshold value (NG_1), the said first threshold value (NG_1) being lower than the peak grey level
25 value (NG_{max}) of the image video signal,

- means for adjusting the luminance of the light produced by the light source to the luminance value corresponding to the peak grey level (NG'_{max}) of the image after compression,

30 - means for multiplying the video signal delivered to the light valve by an expansion factor D equal to the ratio of the peak grey level of the image before compression (NG_{max}) to the peak grey level of the image after compression (NG'_{max}).

35 9. Display device according to Claim 8, characterized in that the light valve is a liquid crystal valve.

10. Display device according to Claim 8, characterized in that the light valve is a micro-mirror valve.